



Texaco Refining
and Marketing Inc

108 Cutting Boulevard
Richmond CA 94804

October 31, 1995

ENV - STUDIES, SURVEYS, & REPORTS

**500 Grand Avenue
Oakland, California**

Ms. Susan Hugo
Alameda County Environmental
Health Department
1131 Harbor Bay Pky.
Alameda, CA 94502-6577

ENVIRONMENTAL
PROTECTION
95 NOV -2 PM 2: 14

Dear Ms. Hugo:

This letter presents the results of groundwater monitoring and sampling conducted by Blaine Tech Services, Inc. on August 29, 1995, at the site referenced above (see Plate 1, Site Vicinity Map). Based on groundwater level measurements, the areal hydraulic gradient was estimated to be south (see Plate 2, Groundwater Gradient Map). TPHg and benzene concentrations are shown on Plate 3. Tables 1 and 2 list historical groundwater monitoring data and analytical results, respectively.

The certified analytical report, chain-of-custody, field data sheets, bill of lading, and quarterly summary report are in the Appendix. Texaco Environmental Services' Standard Operating Procedures may be found in Texaco's first quarter, 1995 monitoring report.

If you have any questions or comments regarding this site, please call the Texaco Environmental Services' site Project Coordinator, Tom Hargett at (818) 505-2733.

Best Regards,

Rebecca Digerness
Environmental Assistant

Karen E. Petryna
Engineer
Texaco Environmental Services

RBD:hs
P:\GWMP\QMR\500G\QMR.LET

Enclosures

cc: Mr. Richard Hiett
CRWQCB - San Francisco Bay Region
2101 Webster St., Suite 500
Oakland, CA 94612

RAOFile-UCPFile-TWHargett (w/enclosures) RRZielinski (w/o enclosures)

pr: KEP

**Groundwater Monitoring and Sampling
Third Quarter, 1995
at the
Former Texaco Service Station
500 Grand Avenue
Oakland, CA**

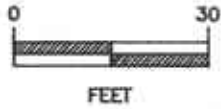


SOURCE
 1993 THE THOMAS GUIDE
 ALAMEDA COUNTY, PAGE 9 (D4)



TEXACO
 REFINING AND MARKETING, INC.
 TEXACO ENVIRONMENTAL SERVICES

PLATE 1
 SITE VICINITY MAP
 FORMER TEXACO SERVICE STATION
 500 GRAND AVE. / EUCLID AVE.,
 OAKLAND, CALIFORNIA



EUCLID AVE.

SEWER LINE (TYP.)

SEWER M.H.

BURK ST.

LEASE LINE

FORMER SERVICE BAYS

FORMER W.O. TANK

FORMER LIST'S LOCATION

FORMER PRODUCT LINES

FORMER ISLAND

FORMER CANOPY

MW-66

SIDEWALK

APPROACH

APPROACH

MW-6A

MW-6E

13.63'

MW-6K

MW-6L

NM

MW-6C

MW-6D

APPROACH

SIDEWALK

APPROACH

GRAND AVE.

12.00'

10.00'

8.00'

6.00'

MW-6H

11.49'

MW-6I

8.31'

MW-6J

10.32'

APPROXIMATE
GROUNDWATER
GRADIENT

MW-6F

5.96'

MW-6G

5.18'

LAKE MERRITT
PARK



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REFINING AND MARKETING INC.
TEXACO ENVIRONMENTAL SERVICES

PLATE 2 : GROUNDWATER GRADIENT MAP
(08/29/1995)

FORMER TEXACO SERVICE STATION

500 GRAND AVE. / EUCLID AVE.,
OAKLAND, CALIFORNIA

SCALE	1"=30'-0"	LOCATION #	62-488-0235
DRAWN BY	AMA	DATE	10/24/1995
CHECKED BY	ED	DATE	10/25/95
DRAWING NO.	(OAKLAND) GR-ELI-OK.DWG		

LEGEND :



MW-6F

GROUNDWATER MONITORING WELL LOCATION,
AND WELL NUMBER



MW-6A

ABANDONED GROUNDWATER MONITORING WELL LOCATION,
AND WELL NUMBER



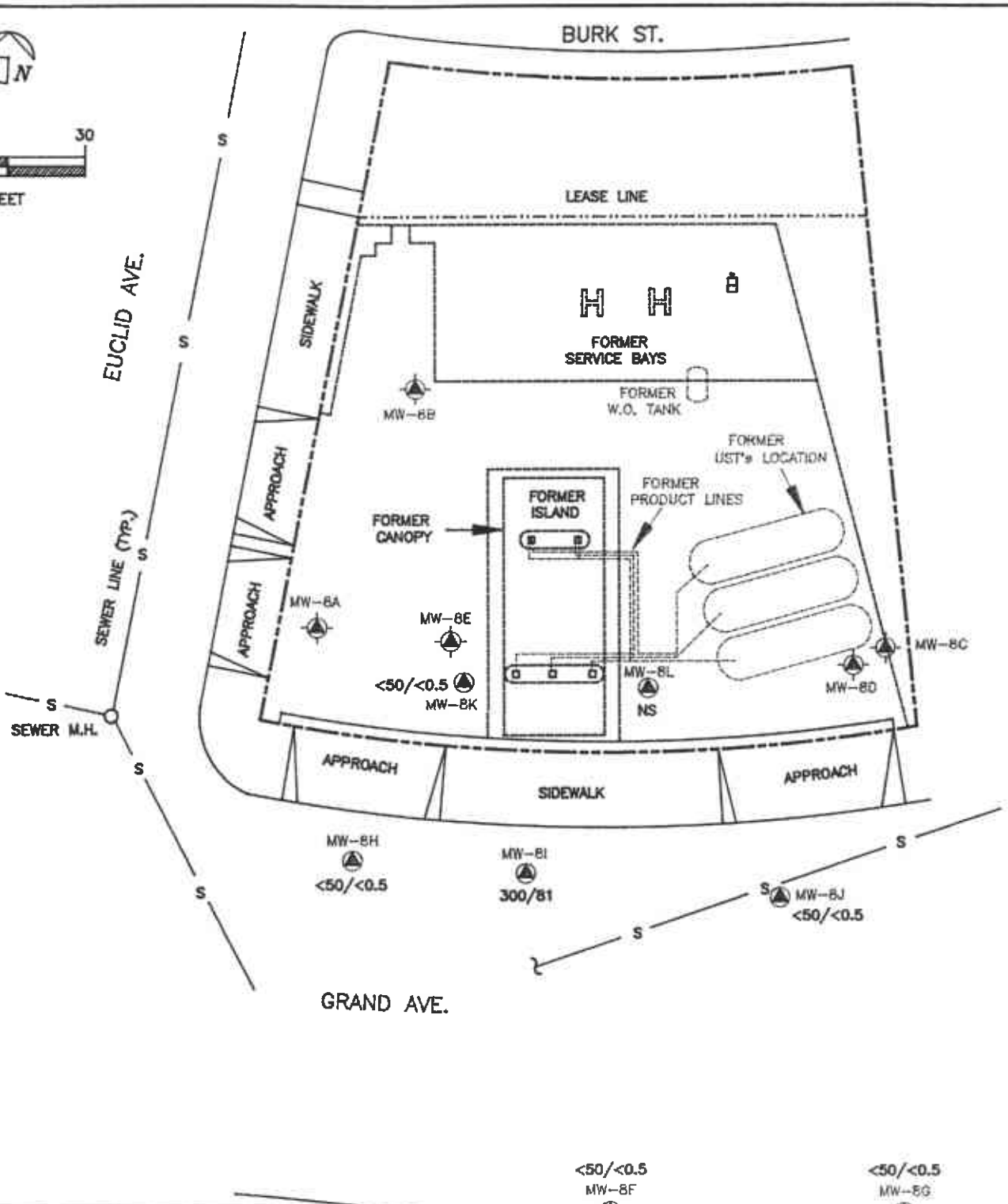
GROUNDWATER CONTOUR LINE

5.96'

NM

GROUNDWATER ELEVATION (ABOVE MSL)

NOT MONITORED



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REFINING AND MARKETING INC.
TEXACO ENVIRONMENTAL SERVICES

PLATE 3 : TPH₂/BENZENE CONCENTRATION IN GROUNDWATER
(08/29/1995)

FORMER TEXACO SERVICE STATION
500 GRAND AVE. / EUCLID AVE.,
OAKLAND, CALIFORNIA

SCALE	1"=30'-0"	LOCATION #	62-488-0235
DRAWN BY	AMA	DATE	10/24/1995
CHECKED BY	ED	DATE	10/25/95
DRAWING NO.	(OAKLAND) GR-EU-OK.DWG		

LAKE MERRITT PARK

LEGEND :



-  MW-8F GROUNDWATER MONITORING WELL LOCATION, AND WELL NUMBER
-  MW-8A ABANDONED GROUNDWATER MONITORING WELL LOCATION, AND WELL NUMBER
- <50/<0.5 TPH₂/BENZENE CONCENTRATION IN GROUNDWATER (ppb)
- NS WELL NOT SAMPLED

Table 1
Groundwater Elevation Data
500 Grand Avenue, Oakland, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)
MW-8A	Well Properly Abandoned			
MW-8B	Well Properly Abandoned			
MW-8C	Well Properly Abandoned			
MW-8D	Well Properly Abandoned			
MW-8E	Well Properly Abandoned			
MW-8F	03/29/91	97.94		
	01/23/92		10.24	87.70
	02/28/92		9.93	88.01
	03/26/92		8.78	89.16
	04/30/92		9.36	88.58
	09/28/92		11.83	86.11
	11/19/92		11.22	86.72
	02/12/93		9.66	88.28
	05/06/93		8.83	89.11
	08/16/93	14.04 *	10.16	3.88
	10/12/93		10.60	3.44
	02/03/94		9.29	4.75
	05/31/94		9.34	4.70
	08/25/94		10.14	3.90
	11/02/94		10.42	3.62
	01/31/95		7.47	6.57
	05/18/95		8.00	6.04
	08/29/95		8.08	5.96

Table 1
Groundwater Elevation Data
500 Grand Avenue, Oakland, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)
MW-8G	04/23/91	97.24		
	01/23/92		11.30	85.94
	02/28/92		10.83	86.41
	03/26/92		9.20	88.04
	04/30/92		9.00	88.24
	09/28/92		13.32	83.92
	11/19/92		Well Inaccessible	
	02/12/93		Well Inaccessible	
	05/06/93		11.18	86.06
	08/16/93	13.32 *	9.51	3.81
	10/12/93		10.93	2.39
	02/03/94		9.69	3.63
	05/31/94		9.24	4.08
	08/25/94		9.74	3.58
	11/02/94		10.08	3.24
	01/31/95		5.75	7.57
	05/18/95		6.60	6.72
08/29/95		8.14	5.18	
MW-8H	03/29/91	98.90		
	01/23/92		3.74	95.16
	02/28/92		4.44	94.46
	03/26/92		4.21	94.69
	04/30/92		3.46	95.44
	09/28/92		Well Inaccessible	
	11/19/92		3.75	95.15
	02/12/93		4.12	94.78
	05/06/93		3.85	95.05
	08/16/93	15.04 *	3.88	11.16
	10/12/93		3.80	11.24
	02/03/94		3.71	11.33
	05/31/94		3.80	11.24
	08/25/94		3.89	11.15
	11/02/94		3.64	11.40
	01/31/95		3.58	11.46
	05/18/95		3.53	11.51
08/29/95		3.55	11.49	

Table 1
Groundwater Elevation Data
500 Grand Avenue, Oakland, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)
MW-8I	03/29/91	98.27		
	01/23/92		6.33	91.94
	02/28/92		6.55	91.72
	03/26/92		6.45	91.82
	04/30/92		6.48	91.79
	09/28/92		Well Inaccessible	
	11/19/92		6.37	91.90
	02/12/93		6.44	91.83
	05/06/93		6.36	91.91
	08/16/93	14.40 *	6.35	8.05
	10/12/93		5.99	8.41
	02/03/94		5.84	8.56
	05/31/94		6.25	8.15
	08/25/94		6.31	8.09
	11/02/94		6.10	8.30
	01/31/95		5.83	8.57
	05/18/95		6.09	8.31
	08/29/95		6.09	8.31
	MW-8J	03/29/91	97.69	
01/23/92			6.31	91.38
02/28/92			6.28	91.41
03/26/92			6.20	91.49
04/30/92			6.48	91.21
09/28/92			Well Inaccessible	
11/19/92			6.55	91.14
02/12/93			7.46	90.23
05/06/93			6.21	91.48
08/16/93		13.82 *	6.29	7.53
10/12/93			5.87	7.95
02/03/94			5.98	7.84
05/31/94			6.10	7.72
08/25/94			6.01	7.81
11/02/94			5.90	7.92
01/31/95			5.07	8.75
05/18/95			5.33	8.49
08/29/95			3.50	10.32

Table 1
Groundwater Elevation Data
500 Grand Avenue, Oakland, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)
MW-8K	08/16/93	15.18 *	2.08	13.10
	10/12/93		1.95	13.23
	02/03/94		1.48	13.70
	05/31/94		1.59	13.59
	08/25/94		2.00	13.18
	11/02/94		2.10	13.08
	01/31/95		1.35	13.83
	05/18/95		1.36	13.82
	08/29/95		1.55	13.63
	MW-8L	08/16/93	14.44 *	2.47
10/12/93			2.36	12.08
02/03/94			2.82	11.62
05/31/94			2.66	11.78
08/25/94			2.34	12.10
11/02/94			Well Obstructed	
01/31/95			0.08	14.36
05/18/95			0.42	14.02
08/29/95			Well Inaccessible	
* = New well elevation survey performed on August 16, 1993 based on mean sea level (MSL). Prior data based on arbitrary site data.				
TOC = Top of Casing				

Table 2
Groundwater Analytical Data
500 Grand Avenue, Oakland, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPHd (ppm)	TPH as Other* (ppm)
MW-8A	Well properly abandoned								
MW-8B	Well properly abandoned								
MW-8C	Well properly abandoned								
MW-8D	Well properly abandoned								
MW-8E	Well properly abandoned								
MW-8F	01/23/92	<50	4.0	1.3	<0.5	1.9	NA	1.3	NA
	04/30/92	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<500
	09/28/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	11/19/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	02/12/93	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	NA
	05/06/93	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.1	<50
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	10/12/93	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	05/31/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	0.53
	08/25/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	1.4
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	0.52	<5
	01/31/95	<50	<0.5	<0.5	<0.5	<0.5	NA	0.29	<5
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	NA	0.054	<5
	08/29/95	<50	<0.5	<0.5	<0.5	<0.5	<10	0.083	<5
MW-8G	** 01/24/92	<50	<0.5	<0.5	<0.5	<0.5	NA	0.98	NA
	04/30/92	<50	1.7	<0.5	<0.5	<0.5	NA	<0.05	<500
	09/28/92	Well Dry							
	11/19/92	Well Inaccessible							
	02/12/93	Well Inaccessible							
	04/29/93	<50	<0.5	<0.5	<0.5	<0.5	NA	0.06	<250
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	10/12/93	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	05/31/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<0.2
	08/25/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	0.86
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	0.53	<5
	01/31/95	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<5
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<5
	08/29/95	<50	<0.5	<0.5	<0.5	<0.5	<10	0.12	<5

Table 2
Groundwater Analytical Data
500 Grand Avenue, Oakland, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPHd (ppm)	TPH as Other* (ppm)
MW-8H	01/23/92	110	7.2	1.2	4.7	3.2	NA	<0.06	NA
	04/30/92	190	11	1.5	5.6	3.6	NA	0.09	<500
	09/28/92	Well Inaccessible							
	11/19/92	130	6.8	<0.5	1.1	1.5	NA	NA	NA
	02/12/93	73	5.9	<0.5	0.8	<0.5	NA	NA	NA
	05/06/93	57	1.7	<0.5	<0.5	<0.5	NA	<0.1	<50
	08/16/93	<50	0.5	<0.5	0.5	1.4	NA	<0.05	<50
	10/12/93	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	05/31/94	<50	0.79	<0.5	<0.5	<0.5	NA	<0.05	1.6
	08/25/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	4.0
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	0.76	<5
	01/31/95	<50	<0.5	<0.5	<0.5	<0.5	NA	0.19	<5
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	NA	0.37	6.6
	08/29/95	<50	<0.5	<0.5	<0.5	<0.5	<10	1.0	<5
MW-8I	01/23/92	820	420	7	27	20	NA	0.21	NA
	04/30/92	2,200	1,800	19	180	25	NA	0.43	<500
	09/28/92	Well Inaccessible							
	11/19/92	720	120	1.1	29	13	NA	NA	NA
	02/12/93	4,000	970	9.2	52	36	NA	NA	NA
	05/06/93	1,400	370	2.4	40	8.4	NA	<0.01	<50
	08/16/93	<50	3.1	<0.5	6	<0.5	NA	<0.05	<50
	10/12/93	<50	1.4	<0.5	<0.5	<0.5	NA	<0.05	<50
	02/03/94	1,000	270	3.2	51	14	NA	<0.05	<50
	05/31/94	1,400	330	4.6	52	16	NA	<0.05	0.33
	08/25/94	540	14	0.58	30	4.3	NA	<0.05	0.73
	11/02/94	310	5.7	0.74	20	<0.5	NA	0.37	<5
	01/31/95	840	290	4.5	45	1.6	NA	0.91	<5
	05/18/95	1,700	390	7.8	80	10	NA	1.1	<5
	08/29/95	300	81	<0.5	13	0.63	<10	0.56	<5

Table 2
Groundwater Analytical Data
500 Grand Avenue, Oakland, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPHd (ppm)	TPH as Other* (ppm)
MW-8J	01/23/92	<50	1	<0.5	<0.5	<0.5	NA	<0.05	NA
	04/30/92	<50	2	<0.5	<0.5	<0.5	NA	<0.05	<500
	09/28/92	Well Inaccessible							
	11/19/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	02/12/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	05/06/93	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.01	<50
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	10/12/93	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	05/31/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<0.2
	08/25/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	1.0
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<5
	01/31/95	<50	3.7	<0.5	<0.5	<0.5	NA	<0.05	<5
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<5
08/29/95	<50	<0.5	<0.5	<0.5	<0.5	<10	0.25	<5	
MW-8K	05/21/93	54	12	<0.5	<0.5	<0.5	NA	<0.05	<50
	08/16/93	<50	<0.5	<0.5	1.0	<0.5	NA	<0.05	<50
	10/24/93	<50	4.2	<0.5	<0.5	<0.5	NA	<0.05	<50
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<50
	05/31/94	<50	1.0	0.57	<0.5	<0.5	NA	<0.05	<0.2
	08/25/94	<50	0.78	<0.5	<0.5	<0.5	NA	<0.05	0.98
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<5
	01/31/95	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<5
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<5
08/29/95	<50	<0.5	<0.5	<0.5	<0.5	<10	0.16	<5	
MW-8L	05/21/93	76	1.1	<0.5	<0.5	6	NA	<0.05	<50
	08/16/93	<50	<0.5	<0.5	0.7	1.1	NA	<0.05	<50
	10/12/93	110	13	<0.5	6	<0.5	NA	<0.05	<50
	02/03/94	590	61	2.4	<0.5	110	NA	<0.05	<50
	05/31/94	410	77	<0.5	20	1.1	NA	<0.05	<0.2
	08/25/94	260	16	<0.5	2.5	<0.5	NA	<0.05	1.1
	11/02/94	Not Sampled							
	01/31/95	Not Sampled							
	05/18/95	Not Sampled							
08/29/95	Not Sampled								

Table 2
Groundwater Analytical Data
500 Grand Avenue, Oakland, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPHd (ppm)	TPH as Other* (ppm)
EB	08/25/94	69	<0.5	<0.5	<0.5	<0.5	NA	<0.05	0.71
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<5
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.05	<5
	08/29/95	<50	<0.5	<0.5	<0.5	<0.5	<10	0.059	<5
TB	08/25/94	52	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	08/29/95	<50	<0.5	<0.5	<0.5	<0.5	<10	NA	NA
MTBE = Methyl-tert-butylether									
EB = Equipment Blank									
TB = Trip Blank									
ppb = parts per billion									
ppm = parts per million									
NA = Not Analyzed									
< = Less than the detection limit for the specified method of analysis.									
* = Includes "heavy" petroleum hydrocarbons such as waste oil, mineral spirits, jet fuel, or fuel oil.									
** = Non-diesel mix >C16. The certified analytical report for sample MW-8G was revised on 10/21/93.									

801 Western Avenue
 Glendale, CA 91201
 818/247-5737
 Fax: 818/247-9797

LOG NO: G95-08-586

Received: 31 AUG 95

Mailed: SEP 13 1995

Ms. Rebecca Digerness
 Texaco Environmental Services
 108 Cutting Boulevard
 Richmond, CA 94804

Purchase Order: 94-1446346+4370

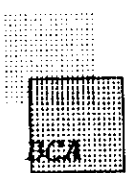
Requisition: 624880235
 Project: FKEP1014L

REPORT OF ANALYTICAL RESULTS

Page 1

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TRPH (CADHS/418.1) mg/L	TPH (CADHS/3510)	Date Extracted	Date Analyzed	Dilution Factor	TPH-d mg/L	Carbon Range	TPH/BTEX (CADHS/8020)		TPH-g ug/L
									Date Analyzed	Dilution Factor	
RDL							0.05			1	50
1*MW-8F	08/29/95	<5	09/01/95	09/09/95	1	0.083	C10-C25	09/08/95	1	<50	
2*MW-8G	08/29/95	<5	09/01/95	09/09/95	1	0.12	C10-C25	09/08/95	1	<50	
3*MW-8H	08/29/95	<5	09/01/95	09/09/95	1	1.0	C10-C25	09/08/95	1	<50	
4*MW-8I	08/29/95	<5	09/01/95	09/09/95	1	0.56	C10-C25	09/09/95	1	300	
5*MW-8J	08/29/95	<5	09/01/95	09/09/95	1	0.25	C10-C25	09/09/95	1	<50	
6*MW-8K	08/29/95	<5	09/01/95	09/09/95	1	0.16	C10-C25	09/09/95	1	<50	



801 Western Avenue
 Glendale, CA 91201
 818/247-5737
 Fax: 818/247-9797

LOG NO: G95-08-586

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 Texaco Environmental Services
 108 Cutting Boulevard
 Richmond, CA 94804

Purchase Order: 94-1446346+4370

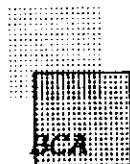
Requisition: 624880235
 Project: FKEP1014L

REPORT OF ANALYTICAL RESULTS

Page 2

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020)					Total Xylenes Isomers ug/L	Carbon Range
		Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Methyl-tert-butylether ug/L			
RDL		0.5	0.5	0.5	10	0.5		
1*MW-8F	08/29/95	<0.5	<0.5	<0.5	<10	<0.5	C6-C12	
2*MW-8G	08/29/95	<0.5	<0.5	<0.5	<10	<0.5	C6-C12	
3*MW-8H	08/29/95	<0.5	<0.5	<0.5	<10	<0.5	C6-C12	
4*MW-8I	08/29/95	81	<0.5	13	<10	0.63	C6-C12	
5*MW-8J	08/29/95	<0.5	<0.5	<0.5	<10	<0.5	C6-C12	
6*MW-8K	08/29/95	<0.5	<0.5	<0.5	<10	<0.5	C6-C12	



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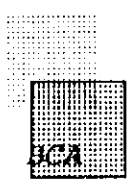
Requisition: 624880235
 Project: FKEP1014L

REPORT OF ANALYTICAL RESULTS

Page 3

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TRPH	TPH				TPH/BTEX			
		(CADHS/418.1)	(CADHS/3510)	TPH-d	Carbon Range	TPH-g				
		mg/L	Date Extracted Date	Date Analyzed Date	Dilution Factor Times	mg/L		Date Analyzed Date	Dilution Factor Times	ug/L
RDL						0.05			1	50
7*EB	08/29/95	<5	09/01/95	09/09/95	1	0.059	C10-C25	09/09/95	1	<50



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REPORT OF ANALYTICAL RESULTS

Page 4

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020)						Carbon Range
		Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Methyl-tert-butylether ug/L	Total Xylenes Isomers ug/L		
RDL		0.5	0.5	0.5	10	0.5		
7*EB	08/29/95	<0.5	<0.5	<0.5	<10	<0.5	C6-C12	



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REPORT OF ANALYTICAL RESULTS

AQUEOUS

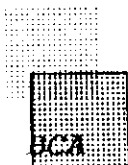
SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020)	Date Analyzed	Dilution Factor	TPH-g	Benzene	Toluene	Ethyl-Benzene	Methyl-tert-butylether	Total Xylenes Isomers	Carbon Range
			Date	Times	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
RDL				1	50	0.5	0.5	0.5	10	0.5	
8*TB	08/29/95	09/09/95		1	<50	<0.5	<0.5	<0.5	<10	<0.5	C6-C12

Tom Hargett
 500 Grand Ave., Oakland
 Alameda County

Jane Freemyer
 Jane Freemyer, Program Manager

The analytical results within this report relate only to the specific compounds and samples investigated and may not necessarily reflect other apparently similar material from the same or a similar location.

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AMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE.....	METHOD.....	EQUIP. BATCH..	ID.NO
			ANALYZED			
508586*1	MW-8F	IR.PETROHC	09.04.95	418.1	533-17	95139 8106
		DIESEL.3520.TES	09.09.95	8015M	536-25	95141 8042
		GAS.BTX.TESNC	09.08.95	8015M.TX	536-21	95265 6843
508586*2	MW-8G	IR.PETROHC	09.04.95	418.1	533-17	95139 8106
		DIESEL.3520.TES	09.09.95	8015M	536-25	95141 8042
		GAS.BTX.TESNC	09.08.95	8015M.TX	536-21	95265 6843
508586*3	MW-8H	IR.PETROHC	09.04.95	418.1	533-17	95139 8106
		DIESEL.3520.TES	09.09.95	8015M	536-25	95141 8042
		GAS.BTX.TESNC	09.08.95	8015M.TX	536-21	95265 6843
508586*4	MW-8I	IR.PETROHC	09.04.95	418.1	533-17	95139 8106
		DIESEL.3520.TES	09.09.95	8015M	536-25	95141 8042
		GAS.BTX.TESNC	09.09.95	8015M.TX	536-21	95265 6843
508586*5	MW-8J	IR.PETROHC	09.04.95	418.1	533-17	95139 8106
		DIESEL.3520.TES	09.09.95	8015M	536-25	95141 8042
		GAS.BTX.TESNC	09.09.95	8015M.TX	536-21	95265 6843
508586*6	MW-8K	IR.PETROHC	09.04.95	418.1	533-17	95139 8106
		DIESEL.3520.TES	09.09.95	8015M	536-25	95141 8042
		GAS.BTX.TESNC	09.09.95	8015M.TX	536-21	95265 6843
508586*7	EB	IR.PETROHC	09.04.95	418.1	533-17	95139 8106
		DIESEL.3520.TES	09.09.95	8015M	536-25	95141 8042
		GAS.BTX.TESNC	09.09.95	8015M.TX	536-21	95265 6843
508586*8	TB	GAS.BTX.TESNC	09.09.95	8015M.TX	536-21	95266 6843

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

ORDER QC REPORT FOR G9508586

DATE REPORTED : 09/12/95

Page 1

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1. TRPH	09.04.95	95139	5.13	3.45	mg/L	149
2. TRPH	09.04.95	95139	5.28	3.45	mg/L	153
3. TPH	C509181*1					
Date Extracted	09.10.95	95141	09/01/95	09/01/95	Date	N/A
Date Analyzed	09.10.95	95141	09/10/95	09/10/95	Date	N/A
TPH (Diesel Range)	09.10.95	95141	1.11	1.00	mg/L	111
Naphthalene Reported	09.10.95	95141	0.0668	0.0500	mg/L	134 Q
Naphthalene Theoretical	09.10.95	95141	0.0500	0.0500	mg/L	100
4. TPH	C509182*1					
Date Extracted	09.10.95	95141	09/01/95	09/01/95	Date	N/A
Date Analyzed	09.10.95	95141	09/10/95	09/10/95	Date	N/A
TPH (Diesel Range)	09.10.95	95141	1.02	1.00	mg/L	102
Naphthalene Reported	09.10.95	95141	0.0592	0.0500	mg/L	118
Naphthalene Theoretical	09.10.95	95141	0.0500	0.0500	mg/L	100
5. BTEX/TPH	C509858*1					
Date Analyzed	09.08.95	95265	09/08/95	09/08/95	Date	N/A
Benzene	09.08.95	95265	14.9	15.2	ug/L	98
Toluene	09.08.95	95265	95.8	97.4	ug/L	98
Ethylbenzene	09.08.95	95265	18.8	20.4	ug/L	92
Total Xylene Isomers	09.08.95	95265	117	119	ug/L	98
TPH (Gasoline Range)	09.08.95	95265	979	1100	ug/L	89
a,a,a-Trifluorotoluene Rep.	09.08.95	95265	47.9	50.0	ug/L	96
a,a,a-Trifluorotoluene Th.	09.08.95	95265	50.0	50.0	ug/L	100
6. TPH	C509916*1					
Date Analyzed	09.09.95	95266	09/09/95	09/09/95	Date	N/A
Benzene	09.09.95	95266	19.4	15.2	ug/L	128
Toluene	09.09.95	95266	112	97.4	ug/L	115
Ethylbenzene	09.09.95	95266	21.1	20.4	ug/L	103
Total Xylene Isomers	09.09.95	95266	129	119	ug/L	108
TPH (Gasoline Range)	09.09.95	95266	1240	1100	ug/L	113
a,a,a-Trifluorotoluene Rep.	09.09.95	95266	65.9	50.0	ug/L	132
a,a,a-Trifluorotoluene Th.	09.09.95	95266	50.0	50.0	ug/L	100

BC ANALYTICAL

ORDER QC REPORT FOR G9508586

DATE REPORTED : 09/12/95

Page 1

ADDITIONAL LCS PRECISION (DUPLICATES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE % DIFF
1. TRP		09.04.95	95139	5.13	5.28	mg/L	3
2. TPH							
Date Extracted		09.10.95	95141	09/01/95	09/01/95	Date	N/A
Date Analyzed		09.10.95	95141	09/10/95	09/10/95	Date	N/A
TPH (Diesel Range)		09.10.95	95141	1.11	1.02	mg/L	8
Naphthalene Reported		09.10.95	95141	0.0668	0.0592	mg/L	12
Naphthalene Theoretical		09.10.95	95141	0.0500	0.0500	mg/L	0

BC ANALYTICAL

ORDER QC REPORT FOR G9508586

DATE REPORTED : 09/12/95

Page 1

MATRIX QC PRECISION (DUPLICATE SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1. TRPH	9508586*1	09.04.95	95139	3.72	3.66	mg/L	2
2. TPH	9508531*10						
Date Analyzed		09.08.95	95265	09/08/95	09/08/95	Date	N/A
Benzene		09.08.95	95265	17.9	17.8	ug/L	1
Toluene		09.08.95	95265	107	108	ug/L	1
Ethylbenzene		09.08.95	95265	20.1	20.3	ug/L	1
Total Xylene Isomers		09.08.95	95265	124	124	ug/L	0
TPH (Gasoline Range)		09.08.95	95265	1180	1230	ug/L	4
a,a,a-Trifluorotoluene Rep.		09.08.95	95265	47.3	47.0	ug/L	1
a,a,a-Trifluorotoluene Th.		09.08.95	95265	50.0	50.0	ug/L	0
3. TPH	9508586*8						
Date Analyzed		09.09.95	95266	09/09/95	09/09/95	Date	N/A
Benzene		09.09.95	95266	17.2	17.4	ug/L	1
Toluene		09.09.95	95266	105	105	ug/L	0
Ethylbenzene		09.09.95	95266	20.3	19.5	ug/L	4
Total Xylene Isomers		09.09.95	95266	121	120	ug/L	1
TPH (Gasoline Range)		09.09.95	95266	1150	1170	ug/L	2
a,a,a-Trifluorotoluene Rep.		09.09.95	95266	66.8	46.0	ug/L	37
a,a,a-Trifluorotoluene Th.		09.09.95	95266	50.0	50.0	ug/L	0

BC ANALYTICAL

ORDER QC REPORT FOR G9508586

DATE REPORTED : 09/12/95

Page 1

MATRIX QC ACCURACY (SPIKES)
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT
1. TRPH	9508586*1	09.04.95	95139	106	104	3.52	mg/L
2. TPH	9508531*10						
Benzene		09.08.95	95265	118	117	15.2	ug/L
Toluene		09.08.95	95265	110	111	97.4	ug/L
Ethylbenzene		09.08.95	95265	99	100	20.4	ug/L
Total Xylene Isomers		09.08.95	95265	104	104	119	ug/L
TPH (Gasoline Range)		09.08.95	95265	107	112	1100	ug/L
a,a,a-Trifluorotoluene Rep.		09.08.95	95265	95	94	50.0	ug/L
a,a,a-Trifluorotoluene Th.		09.08.95	95265	100	100	50.0	ug/L
3. TPH	9508586*8						
Benzene		09.09.95	95266	113	114	15.2	ug/L
Toluene		09.09.95	95266	108	108	97.4	ug/L
Ethylbenzene		09.09.95	95266	100	96	20.4	ug/L
Total Xylene Isomers		09.09.95	95266	102	101	119	ug/L
TPH (Gasoline Range)		09.09.95	95266	105	106	1100	ug/L
a,a,a-Trifluorotoluene Rep.		09.09.95	95266	134	92	50.0	ug/L
a,a,a-Trifluorotoluene Th.		09.09.95	95266	100	100	50.0	ug/L

BC ANALYTICAL

ORDER QC REPORT FOR G9508586

DATE REPORTED : 09/12/95

Page 1

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1. TRPH	09.04.95	95139	0	0.2	mg/L	418.1
2. TPH	09.10.95	95141	09/01/95	NA	Date	8015M
Date Extracted	09.10.95	95141	09/10/95	NA	Date	8015M
Date Analyzed	09.10.95	95141	0	0.05	mg/L	8015M
TPH (Diesel Range)	09.10.95	95141	0.0518	0.01	mg/L	8015M
Naphthalene Reported	09.10.95	95141	0.0500	NA	mg/L	8015M
Naphthalene Theoretical	09.10.95	95141				
3. BTEY/TPH	09.08.95	95265	09/08/95	NA	Date	8015M
Date Analyzed	09.08.95	95265	0	0.3	ug/L	8015M
Benzene	09.08.95	95265	0.14	0.3	ug/L	8015M
Toluene	09.08.95	95265	0	0.3	ug/L	8015M
Ethylbenzene	09.08.95	95265	0.18	0.6	ug/L	8015M
Total Xylene Isomers	09.08.95	95265	0	100	ug/L	8015M
TPH (Gasoline Range)	09.08.95	95265	51.4	0.5	ug/L	8015M
a,a,a-Trifluorotoluene Rep.	09.08.95	95265	50.0	NA	ug/L	8015M
a,a,a-Trifluorotoluene Th.	09.08.95	95265				
4. TPH	09.09.95	95266	09/09/95	NA	Date	8015M.TX
Date Analyzed	09.09.95	95266	0	0.5	ug/L	8015M.TX
Benzene	09.09.95	95266	0.17	0.5	ug/L	8015M.TX
Toluene	09.09.95	95266	0	0.5	ug/L	8015M.TX
Ethylbenzene	09.09.95	95266	0	NA	ug/L	8015M.TX
Methyl-tert-butylether	09.09.95	95266	0.20	0.5	ug/L	8015M.TX
Total Xylene Isomers	09.09.95	95266	0	50	ug/L	8015M.TX
TPH (Gasoline Range)	09.09.95	95266	53.4	NA	ug/L	8015M.TX
a,a,a-Trifluorotoluene Rep.	09.09.95	95266	50.0	NA	ug/L	8015M.TX
a,a,a-Trifluorotoluene Th.	09.09.95	95266				

SURROGATE RECOVERIES :

BC ANALYTICAL : GLEN LAB : 11:17:02 12 SEP 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
}508586*1							
3015M	Naphthalene	95141	09/09/95	0.0504	0.0500	101	
3015M.TXa,a,a-	Trifluorotoluene	Re95265	09/08/95	53.0	50.0	106	
}508586*2							
3015M	Naphthalene	95141	09/09/95	0.0538	0.0500	108	
3015M.TXa,a,a-	Trifluorotoluene	Re95265	09/08/95	53.0	50.0	106	
}508586*3							
3015M	Naphthalene	95141	09/09/95	0.0592	0.0500	118	
3015M.TXa,a,a-	Trifluorotoluene	Re95265	09/08/95	53.1	50.0	106	
}508586*4							
3015M	Naphthalene	95141	09/09/95	0.0592	0.0500	118	
3015M.TXa,a,a-	Trifluorotoluene	Re95265	09/09/95	54.8	50.0	110	
}508586*5							
3015M	Naphthalene	95141	09/09/95	0.0498	0.0500	100	
3015M.TXa,a,a-	Trifluorotoluene	Re95265	09/09/95	53.2	50.0	106	
}508586*6							
3015M	Naphthalene	95141	09/09/95	0.0542	0.0500	108	
3015M.TXa,a,a-	Trifluorotoluene	Re95265	09/09/95	52.3	50.0	105	
}508586*7							
3015M	Naphthalene	95141	09/09/95	0.0563	0.0500	113	
3015M.TXa,a,a-	Trifluorotoluene	Re95265	09/09/95	54.6	50.0	109	
}508586*8							
3015M.TXa,a,a-	Trifluorotoluene	Re95266	09/09/95	53.6	50.0	107	

SURROGATE RECOVERIES :

BC ANALYTICAL : GLEN LAB : 11:17:03 12 SEP 1995 - P. 1 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
1508531*10*R1							
3015M.TXa	a,a,a-Trifluorotoluene	Re95265	09/08/95	53.8	50.0	108	
1508531*10*S1							
3015M.TXa	a,a,a-Trifluorotoluene	Re95265	09/08/95	47.3	50.0	95	
1508531*10*S2							
3015M.TXa	a,a,a-Trifluorotoluene	Re95265	09/08/95	47.0	50.0	94	
1508531*10*T							
3015M.TXa	a,a,a-Trifluorotoluene	Re95265	09/08/95	50.0	50.0	100	
1508586*8*R1							
3015M.TXa	a,a,a-Trifluorotoluene	Re95266	09/09/95	53.6	50.0	107	
1508586*8*S1							
3015M.TXa	a,a,a-Trifluorotoluene	Re95266	09/09/95	66.8	50.0	134	
9508586*8*S2							
8015M.TXa	a,a,a-Trifluorotoluene	Re95266	09/09/95	46.0	50.0	92	
9508586*8*T							
8015M.TXa	a,a,a-Trifluorotoluene	Re95266	09/09/95	50.0	50.0	100	
B509103*1*MB							
8015M	Naphthalene	95141	09/10/95	0.0518	0.0500	104	
B509477*1*MB							
8015M	a,a,a-Trifluorotoluene	Re95265	09/08/95	51.4	50.0	103	
B509511*1*MB							
8015M.TXa	a,a,a-Trifluorotoluene	Re95266	09/09/95	53.4	50.0	107	
C509181*1*LC							
8015M	Naphthalene	95141	09/10/95	0.0668	0.0500	134 Q	
C509181*1*LT							
8015M	Naphthalene	95141	09/10/95	0.0500	0.0500	100	
C509182*1*LC							
8015M	Naphthalene	95141	09/10/95	0.0592	0.0500	118	

SURROGATE RECOVERIES :

BC ANALYTICAL : GLEN LAB : 11:17:03 12 SEP 1995 - P. 2 :

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
509182*1*LT							
3015M	Naphthalene	95141	09/10/95	0.0500	0.0500	100	
509858*1*LC							
3015M	a,a,a-Trifluorotoluene	Re95265	09/08/95	47.9	50.0	96	
509858*1*LT							
3015M	a,a,a-Trifluorotoluene	Re95265	09/08/95	50.0	50.0	100	
509916*1*LC							
3015M.TXa	a,a,a-Trifluorotoluene	Re95266	09/09/95	65.9	50.0	132	
509916*1*LT							
3015M.TXa	a,a,a-Trifluorotoluene	Re95266	09/09/95	50.0	50.0	100	

677500586

Chain-of-Custody

Texaco Environmental Services

108 Cutting Boulevard
 Richmond, California 94804
 Phone: (510) 236-3541
 FAX: (510) 237-7821

Forward Results to the Attention of Rebecca Digerness
 Texaco Project Corordinator Tom Hargett

Site Name: Texaco Loc# 624880235
 Site Address: 500 Grand Ave. Oakland, CA
 Contractor Project Number: 770829-H1
 Contractor Name: Blaine Tech Services, Inc.
 Address: 985 Timothy Dr., San Jose, CA 95133
 Project Contact: Jim Keller
 Phone/FAX: (408) 995-5535 / (408) 293-8773

Laboratory: B C Analytical
 Turn Around Time: normal (10 day)
 Samplers (PRINT NAME): TROY N HORNER
 Sampler Signature: [Signature]
 Date Samples Collected: 8/29/95

ANALYSIS

cooler temp: 6°C
 sample cond:
 good

624880235
 Alameda
 TWH
 Comments FKEP1014

Sample Number	Lab Sample Number	Date/Time Collected	No. of Containers	Type of Containers	Sample Matrix	Preservative	TPH gas/BTEX	TPH Diesel	O&G/TPH (418.1)	TPH Ex. (CB-C36 +)	VOCs 8240/824	P. Halocarbons 8010/80	P. Aromatics 8020/802	Organic Lead	
MW-8F		8/29 1300	7		W		X	X	X	X	X	X	X	X	-1
MW-8G		1327	7		W		X	X	X	X	X	X	X	X	-2
MW-8H		1432	7		W		X	X	X	X	X	X	X	X	-3
MW-8I		1738	7		W		X	X	X	X	X	X	X	X	-4
MW-8J		1400	7		W		X	X	X	X	X	X	X	X	-5
MW-8K		1510	7		W		X	X	X	X	X	X	X	X	-6
ED		1307	5		W		X	X	X	X	X	X	X	X	-7
TD			2		W		X	X	X	X	X	X	X	X	-8

Relinquished by: Troy N. Horner Date: 8/31/95 Time: 13:15
 (Signature) [Signature]
 Relinquished by: Bill Leonard Date: 8-31-95 Time: 4:00
 (Signature) [Signature]
 Relinquished by: Kimberly Eng Date: 8/31/95 Time: 5:30
 (Signature) [Signature]
 Method of Shipment:

Received by: Bill Leonard Date: 8-31-95 Time: 13:05
 (Signature) [Signature]
 Received by: Kimberly Eng Date: 8/31/95 Time: 4:07
 (Signature) [Signature]
 Received by: _____ Date: _____ Time: _____
 (Signature) _____
 Lab Comments:

Groundwater Sampling Form

Project Name 500 GRAND AVE Well No. MW-8F
 Project Number 624880235 Well Type Monitor Extraction Other
 Recorded By TNH Sampled by TNH Date 8/29/95

WELL PURGING

PURGE VOLUME

Well casing diameter
 2-inch 4-inch Other

Well Total Depth (TD, ft. below TOC) 14.00

Depth to Water (WL, ft. below TOC) 8.08

Depth to free phase hydrocarbons (FP, ft. below TOC) _____

Number of well volumes to be purged
 3 10 Other _____

PURGE VOLUME CALCULATION

$$\frac{6.42}{\text{Water Column Length}} \times \frac{.66}{\text{Multiplier}} \times \frac{4.2}{\text{No. Vols}} =$$

MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft)
 2 = 0.17 | 3 = 0.38 | 4 = 0.65 | 4.5 = 0.83 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

PURGE METHOD

Bailor - Type _____
 Pump - Type GRUNDIGS
 Other _____

PUMP INTAKE

Near top Depth (ft) _____
 Near Bottom Depth (ft) 14
 Other _____

Pumping Rate 7 gpm

12.6 gals
 CALCULATED PURGE VOLUME

13.0 gals
 ACTUAL PURGE VOLUME

GROUNDWATER PARAMETER MEASUREMENT Meter Type MYROKL

Time/Gallons	pH	Cond. (uomhcs/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
1240 1 5	7.0	3400	69.8		8.02.0	
1241 1 10	6.7	3600	70.2		8.06.0	
1242 1 13	6.8	3800	70.0		79.2	
1						
1						
1						
1						
1						

Comments during well purge _____
 Well Pumped dry: YES NO Purge water storage/disposal Drummed onsite Other PITS

WELL SAMPLING

SAMPLING METHOD _____ Date/Time Sampled 8/29/95 13:00
 Bailor - Type SSD Sample port Other

GROUNDWATER SAMPLE PARAMETER MEASUREMENTS Meter Type _____

Date/Time/% Recharge	pH	Cond. (uomhcs/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
1 1						

SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-8F</u>	<u>VOA LTR</u>	<u>TPH, PTEX</u>		<u>BCA</u>	
		<u>TPH-D, OGG</u>			

QUALITY CONTROL SAMPLES

Duplicate Samples		Blank Samples	
Original Sample No.	Duplicate Sample No.	Type	Sample No.
		Trip	
		Rinsate	
		Transfer	
		Other:	

Groundwater Sampling Form

Project Name 500 GRAND AVE
 Project Number 624880235
 Recorded By TNH

Well No. MW-86
 Well Type Monitor Extraction Other
 Date 8/29/95

Sampled by TNH

WELL PURGING

PURGE VOLUME

Well casing diameter
 2-inch 4-inch Other
 Well Total Depth (TD, ft. below TOC) 14.30
 Depth to Water (WL, ft. below TOC) 8.14
 Depth to free phase hydrocarbons (FP, ft. below TOC)

Number of well volumes to be purged
 3 10 Other

PURGE VOLUME CALCULATION

$$\frac{6.16}{\text{Water Column Length}} \times \frac{.66}{\text{Multiplier}} \times \frac{4.0}{\text{No. Vols}} =$$

MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft.)
 2 = 0.17 | 3 = 0.38 | 4 = 0.66 | 4.5 = 0.83 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

PURGE METHOD

Bailor - Type
 Pump - Type GRAVITED
 Other

PUMP INTAKE

Near top Depth (ft)
 Near Bottom Depth (ft) 14
 Other
 Pumping Rate 7 gpm

12 gals
 CALCULATED PURGE VOLUME
12 gals
 ACTUAL PURGE VOLUME

GROUNDWATER PARAMETER MEASUREMENT

Meter Type MYRON L

Time/Gallons	pH	Cond. (uomhcs/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
<u>1215</u> 1 4	<u>7.1</u>	<u>3800</u>	<u>72.8</u>		<u>21.9</u>	
<u>1216</u> 1 8	<u>6.8</u>	<u>4200</u>	<u>72.2</u>		<u>24.9</u>	
<u>1217</u> 1 16	<u>6.9</u>	<u>4200</u>	<u>71.8</u>		<u>21.2</u>	

Comments during well purge
 Well Pumped dry: YES NO Purge water storage/disposal Drummed onsite Other BTS

WELL SAMPLING

SAMPLING METHOD Date/Time Sampled 8/29/95 1237 1237
 Bailor - Type SAB Sample port Other

GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Meter Type

Date/Time/% Recharge	pH	Cond. (uomhcs/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor

SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-86</u>	<u>VOA LTR</u>	<u>TPH-BTEX</u> <u>TPH P, O, G</u>		<u>BCA</u>	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.
Trip	
Rinsate	
Transfer	
Other: <u>EBC</u>	<u>1307</u>

Groundwater Sampling Form

Project Name 500 GRAND AVE Well No. MW-8H
 Project Number 624880235 Well Type Monitor Extraction Other
 Recorded By TNH Sampled by TNH Date 8/29/95

WELL PURGING

PURGE VOLUME

Well casing diameter
 2-inch 4-inch Other _____
 Well Total Depth (TD, ft. below TOC) 14.79
 Depth to Water (WL, ft. below TOC) 3.55
 Depth to free phase hydrocarbons (FP, ft. below TOC) _____
 Number of well volumes to be purged
 3 10 Other _____

PURGE METHOD

Bailor - Type _____
 Pump - Type CASINO
 Other _____

PUMP INTAKE

Near top Depth (ft) _____
 Near Bottom Depth (ft) 19
 Other _____

Pumping Rate 7 gpm

$$\frac{11.24}{\text{Water Column Length}} \times \frac{666}{\text{Multiplier}} \times \frac{7.4}{\text{No. Vols}} = \text{CALCULATED PURGE VOLUME}$$

12.2 gals
CALCULATED PURGE VOLUME

MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft.)
 2 = 0.17 | 3 = 0.38 | 4 = 0.65 | 4.5 = 0.83 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

23 gals
ACTUAL PURGE VOLUME

GROUNDWATER PARAMETER MEASUREMENT

Meter Type MYRON L

Time/Gallons	pH	Cond. (uomhes/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
1419 / 8	7.4	3400	76.8		37.0	
1420 / 16	7.6	1400	75.2		25.1	
1421 / 20	7.7	1200	74.8		32.1	
/						
/						
/						
/						
/						

Comments during well purge _____

Well Pumped dry: YES NO Purge water storage/disposal Drummed onsite Other BTS

WELL SAMPLING

SAMPLING METHOD

Date/Time Sampled 8/29/95 11432

Bailor - Type SSP Sample port Other

GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Meter Type _____

Date/Time/% Recharge	pH	Cond. (uomhes/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
/ /						

SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-8H</u>	<u>VOA LTR</u>	<u>TPHS-DTEX</u> <u>TPHD-OGE</u>		<u>BCA</u>	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.
Trip	
Rinsate	
Transfer	
Other:	

Groundwater Sampling Form

Project Name 500 GRAND AVE
 Project Number 624880235
 Recorded By TNH

Well No. AAW-8 I
 Well Type Monitor Extraction Other
 Sampled by TNH Date 8/29/95

WELL PURGING

PURGE VOLUME

Well casing diameter
 2-inch 4-inch Other
 Well Total Depth (TD, ft. below TOC) 14.54
 Depth to Water (WL, ft. below TOC) 6.09
 Depth to free phase hydrocarbons (FP, ft. below TOC) _____
 Number of well volumes to be purged
 3 10 Other _____

PURGE METHOD

Bailer - Type _____
 Pump - Type GRUNDFOS
 Other _____

PUMP INTAKE

Near top Depth (ft) _____
 Near Bottom Depth (ft) _____
 Other _____

Pumping Rate _____ gpm

$$\frac{8.45}{\text{Water Column Length}} \times \frac{.66}{\text{Multiplier}} \times \frac{5.6}{\text{No. Vols}} = \frac{3}{\text{No. Vols}}$$

16.8 gals
CALCULATED PURGE VOLUME

MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft.)
 2 = 0.17 | 3 = 0.38 | 4 = 0.66 | 4.5 = 0.83 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

17 gals
ACTUAL PURGE VOLUME

GROUNDWATER PARAMETER MEASUREMENT

Time/Gallons	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
1322 1 6	7.6	1100	77.4		8.4	
1323 1 12	7.4	1000	76.6		4.8	
1324 1 17	7.4	1100	76.0		5.1	
1						
1						
1						
1						
1						

Comments during well purge _____

Well Pumped dry: YES NO Purge water storage/disposal Drummed onsite Other BTS

WELL SAMPLING

SAMPLING METHOD _____ Date/Time Sampled 8/29/95 1338

Bailer - Type SSB Sample port Other

GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Date/Time/% Recharge	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
1 / 1						

SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-8I</u>	<u>00A 4TR</u>	<u>TNH-BTEX</u> <u>TNH-OBG</u>		<u>BCA</u>	

QUALITY CONTROL SAMPLES

Duplicate Samples	
Original Sample No.	Duplicate Sample No.

Blank Samples	
Type	Sample No.
Trip	
Rinsate	
Transfer	
Other	

Groundwater Sampling Form

Project Name 500 GRAND AVE
 Project Number 624880235
 Recorded By TNH

Well No. MW-8J
 Well Type Monitor Extraction Other
 Sampled by TNH Date 8/27/95

WELL PURGING

PURGE VOLUME

Well casing diameter
 2-inch 4-inch Other
 Well Total Depth (TD, ft. below TOC) 147'
 Depth to Water (MWL, ft. below TOC) 3.50
 Depth to free phase hydrocarbons (FP, ft. below TOC)
 Number of well volumes to be purged
 3 10 Other

PURGE METHOD

Bailor - Type
 Pump - Type GRUNDFOS
 Other

PUMP INTAKE

Near top Depth (ft)
 Near Bottom Depth (ft) 14'
 Other

Pumping Rate 7 gpm
 CALCULATED PURGE VOLUME 22.2 gals
 ACTUAL PURGE VOLUME 23 gals

PURGE VOLUME CALCULATION

$$\frac{11.24}{\text{Water Column Length}} \times \frac{.66}{\text{Multiplier}} \times \frac{7.4}{\text{No. Vols}} =$$

MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft)
 2 = 0.17 | 3 = 0.36 | 4 = 0.66 | 4.5 = 0.63 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

GROUNDWATER PARAMETER MEASUREMENT

Time/Gallons	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
1347 1 8	7.1	2300	69.3		101.2	
1348 1 16	6.8	1700	70.3		67.3	
1349 1 23	6.7	1700	70.2		81.4	
/						
/						
/						
/						
/						

Comments during well purge
 Well Pumped dry: YES NO Purge water storage/disposal Drummed onsite Other BT3

WELL SAMPLING

SAMPLING METHOD: Date/Time Sampled 8/27/95 11400
 Bailor - Type SSB Sample port Other

GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Date/Time/% Recharge	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
/ / /						

SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-8J</u>	<u>10A LTR</u>	<u>TPAG-PIEX</u> <u>TPHD-OSG</u>		<u>BCA</u>	

QUALITY CONTROL SAMPLES

Duplicate Samples		Blank Samples	
Original Sample No.	Duplicate Sample No.	Type	Sample No.
		Trip	
		Rinsale	
		Transfer	
		Other:	

Groundwater Sampling Form

Project Name 500 GRAND AVE
 Project Number 624880235
 Recorded By TNH

Well No. MW-8K
 Well Type Monitor Extraction Other
 Sampled by TNH Date 8/29/95

WELL PURGING

PURGE VOLUME

Well casing diameter
 2-inch 4-inch Other
 Well Total Depth (TD, ft. below TOC) 16.44
 Depth to Water (WL, ft. below TOC) 1.55
 Depth to free phase hydrocarbons (FP, ft. below TOC) _____
 Number of well volumes to be purged
 3 10 Other _____

PURGE METHOD

Bailer - Type TEFLON
 Pump - Type _____
 Other _____

PUMP INTAKE

Near top Depth (ft) _____
 Near Bottom Depth (ft) _____
 Other _____

Pumping Rate _____ gpm

PURGE VOLUME CALCULATION

$$\frac{14.89}{\text{Water Column Length}} \times \frac{.17}{\text{Multiplier}} \times \frac{2.4}{x} \times \frac{3}{\text{No. Vols}} =$$

7.2 gals
CALCULATED PURGE VOLUME
7.5 gals
ACTUAL PURGE VOLUME

MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft.)
 2 = 0.17 | 3 = 0.38 | 4 = 0.66 | 4.5 = 0.83 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

GROUNDWATER PARAMETER MEASUREMENT

Meter Type MYRON L

Time/Gallons	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
1451 / 2.5	7.2	3200	79.5		7200	
1455 / 5	6.9	1600	79.7		7200	
1459 / 7.5	6.8	1400	78.2		7200	
/						
/						
/						
/						
/						

Comments during well purge

Well Pumped dry: YES NO Purge water storage/disposal Drummed onsite Other BT3

WELL SAMPLING

SAMPLING METHOD

Date/Time Sampled MW-8K 11510

Bailer - Type TEFLON Sample port Other

GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Meter Type _____

Date/Time/% Recharge	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
/ /						

SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-8K</u>	<u>VQA CTR</u>	<u>TPHS, PTEX</u> <u>TPHO-OSG</u>		<u>BCA</u>	

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.
Trip	
Rinsale	
Transfer	
Other:	

SOURCE RECORD BILL OF LADING
 FOR NON-HAZARDOUS PURGEWATER RECOVERED FROM
 GROUNDWATER WELLS AT TEXACO FACILITIES IN THE
 STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE-
 WATER WHICH HAS BEEN RECOVERED FROM GROUND-
 WATER WELLS IS COLLECTED BY THE CONTRACTOR,
 MADE UP INTO LOADS OF APPROPRIATE SIZE AND
 HAULED TO THE DESTINATION DESIGNATED BY TEXACO
 ENVIRONMENTAL SERVICES (TES).

Contractor: Blaine Tech Services, Inc.
 Address: 985 Timothy Drive
 City, State, ZIP: San Jose, CA 95133
 Phone: (408) 995-5535

is authorized by Texaco Environmental Services to recover,
 collect, apportion into loads, and haul the NON-HAZARDOUS
 WELL PURGEWATER that is drawn from wells at the Texaco
 facility listed below and to deliver that purgewater to an
 appropriate destination designated by TEXACO ENVIRONMENTAL
 SERVICES in either Redwood City, California or in Richmond,
 California. Transport routing of the Non-Hazardous Well
 Purgewater may be directed from one Texaco facility to the
 designated destination point; from one Texaco facility to the
 designated destination point via another Texaco facility; from a
 Texaco facility via the contractor's facility, or any combination
 thereof. The Non-Hazardous Well Purgewater is and remains the
 property of Texaco Environmental Services (TES).

This SOURCE RECORD BILL OF LADING was initiated to cover
 the recovery of Non-Hazardous Well Purgewater from wells at
 the Texaco facility described below:

TEXACO #: 624880235
 Address: 500 GRAND AVE OAKLAND CA
 City, State, ZIP: OAKLAND CA

Well I.D.	Gals.	Well I.D.	Gals.
/		/	
/		/	
PURGE WATER /		/	
/		/	
/		/	
/		/	
/		/	
/		/	
/		/	
/		/	
/		/	

Total gals. _____ added rinse water _____

Total Gals. Recovered _____

Job #: 950829-H1
 Date: 8/29/95
 Time: _____
 Signature: Tom M. Norton

REC'D AT: BTS
 Date: 8/29/95
 Time: _____
 Signature: Tom M. Norton

**SECOND-QUARTER 1995 PROGRESS REPORT
500 GRAND AVENUE
OAKLAND, CALIFORNIA**

HISTORY OF INVESTIGATIVE AND REMEDIAL ACTIONS

The site is the former location of a Texaco service station location. Currently the site is a fenced, vacant lot. A site preliminary subsurface investigation was conducted in May 1988.

During the initial investigation, a soil gas survey was conducted, 15 soil borings were drilled, and 5 on-site groundwater monitoring wells were installed. In 1989, five off-site wells were installed. The initial five on-site wells have been abandoned and replaced by two wells located at the southern perimeter of the site.

Over 2,400 cubic yards of hydrocarbon-impacted soil have been excavated and removed from within the property boundaries. The waste oil tank, tank backfill material, and impacted soil were excavated and disposed of in September 1990. Clay sewer pipes and contaminated soil from an abandoned utility trench near the former waste oil tank were removed from the site in early 1991. Three underground storage tanks, dispenser islands and associated piping, stockpiled soils, and site structures were removed from the site in April 1992. The excavated area was backfilled and compacted using clean imported material.

WORK PERFORMED SECOND QUARTER 1995

Groundwater monitoring was conducted during the quarter. Results are provided in a separate groundwater monitoring report.

PROPOSED INVESTIGATIONS OR REMEDIATION PLANS

All petroleum impacted soils underlying the site, with a possible exception of a very narrow band along the Grand Avenue sidewalk, have been removed by the extensive soil excavation activities. No further investigation or remediation of the vadose-zone soils is proposed.

Groundwater at the site has been affected by gasoline, diesel, and hydrocarbons above the range of diesel. Since the removal of on-site contaminated soils, significant reductions in TPH-g and TPH-d concentrations in groundwater have been reported for samples taken from on- and off-site wells. It is proposed that downgradient wells continue to be monitored to document the biodegradation of the remaining dissolved-phase hydrocarbons in the groundwater.

METHOD AND LOCATION OF DISPOSAL

Ground water purged during the quarterly monitoring was transported to the Texaco Terminal in Richmond, California, for disposal.